**Maryland Historical Trust**

Maryland Inventory of Historic Properties number: HO-680

Name: Old Columbia Pike over Tiber Run / HO-132

The bridge referenced herein was inventoried by the Maryland State Highway Administration as part of the Historic Bridge Inventory, and SHA provided the Trust with eligibility determinations in February 2001. The Trust accepted the Historic Bridge Inventory on April 3, 2001. The bridge received the following determination of eligibility.

**MARYLAND HISTORICAL TRUST**

Eligibility Recommended _____ Eligibility Not Recommended __X____

Criteria: ____A ____B ____C ____D Considerations: ___A ___B ___C ___D ___E ___F ___G __None

Comments: _____

_____

_____

Reviewer, OPS: _Anne E. Bruder_____ Date: __3 April 2001____

Reviewer, NR Program: __Peter E. Kurtze_____ Date: __3 April 2001____

**MARYLAND INVENTORY OF HISTORIC BRIDGES** **MHT No.** HO-680
**HISTORIC BRIDGE INVENTORY**
**MARYLAND STATE HIGHWAY ADMINISTRATION/**
**MARYLAND HISTORICAL TRUST**

**SHA Bridge No.** HO-132 **Bridge name** Old Columbia Pike over Tiber River

**LOCATION:**
**Street/Road name and number [facility carried]** Old Columbia Pike

**City/town** Ellicott City **Vicinity** _____

**County** Howard

**This bridge projects over: Road**____ **Railway**_____ **Water** X **Land** ____

**Ownership: State** _____ **County** X **Municipal** _____ **Other** _____

**HISTORIC STATUS:**
**Is the bridge located within a designated historic district? Yes** X **No** _____
**National Register-listed district** X **National Register-determined-eligible district** __
**Locally-designated district** _____ **Other** _____

**Name of district** Ellicott City Historic District

**BRIDGE TYPE:**
**Timber Bridge** _____:
**Beam Bridge** _____ **Truss -Covered** ___ **Trestle** ___ **Timber-And-Concrete** ___

**Stone Arch Bridge** _____

**Metal Truss Bridge** _____

**Movable Bridge** ____:
**Swing** _____ **Bascule Single Leaf** __ **Bascule Multiple Leaf** _____
**Vertical Lift** _____ **Retractile**_____ **Pontoon** _____

**Metal Girder**_____:
**Rolled Girder** _____ **Rolled Girder Concrete Encased** _____
**Plate Girder** _____ **Plate Girder Concrete Encased** _____

**Metal Suspension** _____

**Metal Arch** _____

**Metal Cantilever** _____

**Concrete** X:
**Concrete Arch**_____ **Concrete Slab** ____ **Concrete Beam** X **Rigid Frame** _____
**Other** _____ **Type Name** _____

**DESCRIPTION:**

**Setting: Urban** ____X____ **Small town** _____ **Rural** _____

**Describe Setting:**

Bridge No. HO-132 carries Old Columbia Pike over Tiber River in Howard County. Old Columbia Pike extends south from Main Street and crosses Tiber River just south of the intersection. The Tiber River flows west-east. The bridge is located in a heavily developed section of Ellicott City, and is surrounded by commercial and residential structures. The Tiber River has a stone wall embankment and travels under buildings and parking lots through most of Ellicott City. The stream is not visible from Old Columbia Pike, as structures are located on all sides of the intersection of Old Columbia Pike and Main Street. The stream travels under adjacent buildings before passing under Old Columbia Pike.

**Describe Superstructure and Substructure:**

Bridge No. HO-132 is a 1-span, 2-lane concrete beam bridge. The bridge was originally built in 1921, and widened in 1964. The structure span length is 24 feet long, with a total structure length of 26 feet. Immediately adjacent to the west side of the bridge is a steel-framed section supported by masonry abutments and concrete columns previously used to support an automobile service station. In 1964, the station was demolished and the roadway over the T-beam section was extended over the steel-frame section. The roadway width varies from 24 feet on the south approach to 104 feet at the intersection with Main Street. The superstructure consists of five (5) concrete beams which support an integral concrete deck with a bituminous wearing surface. The substructure consists of masonry abutments. There are no wing walls. The bridge is posted for 3/4 tons on the north approach and 14 tons on the south approach. The bridge has a Howard County sufficiency rating of 63.6.

According to the 1996 inspection report, this structure was in fair condition with spalling and section loss. Spalling with exposed reinforcement bars are evident on some T-beam flanges and stems. The steel beams have areas of corrosion with five (5) to fifteen (15) percent section loss. The stone masonry abutments are in generally good condition.

**Discuss Major Alterations:**

The bridge was first widened onto a steel frame supporting structure in 1964. In 1983, and again in 1993, extensive repairs were made to the concrete and stone masonry of the bridge.

**HISTORY:**

**WHEN was the bridge built:** 1921
**This date is: Actual** ____X____ **Estimated** _____
**Source of date: Plaque** ____ **Design plans** ___ **County bridge files/inspection form** X
**Other (specify)**

**WHY was the bridge built?**

The bridge was constructed in response to the need for a more efficient transportation network and increased load capacity.

**WHO was the designer?**

Unknown

**WHO was the builder?**

Unknown

**WHY was the bridge altered?**

The bridge was altered to ensure its structural integrity.

**Was this bridge built as part of an organized bridge-building campaign?**

There is no evidence that the bridge was built as part of an organized bridge building campaign.

**SURVEYOR/HISTORIAN ANALYSIS:**

**This bridge may have National Register significance for its association with:**
**A - Events _____ B- Person _____**
**C- Engineering/architectural character _____**

The bridge does not have National Register significance. The bridge was reviewed by the Maryland Historical Trust on an Internal NR-eligibility Review Form in 1996. It was determined that the bridge does not retain sufficient integrity to be considered a contributing resource within the Ellicott City Historic District. The bridge has had two periods of significant alteration which have compromised its integrity.

**Was the bridge constructed in response to significant events in Maryland or local history?**

The earliest concrete beam bridges in the nation were deck girder spans that featured concrete slabs supported by a series of longitudinal concrete beams. This method of construction was conceptually quite similar to the traditional timber beam bridge which had found such widespread use both in Europe and in America. Developed early in the twentieth century, deck girder spans continued to be widely used in 1920 when noted bridge engineer Milo Ketchum wrote *The Design of Highway Bridges of Steel, Timber and Concrete* (Ketchum 1920).

Although visually similar to deck girder bridges, the T-beam span features a series of reinforced concrete beams that are integrated into the concrete slab, forming a monolithic mass appearing in cross section like a series of upper-case "T"s connected at the top. Thaddeus Hyatt is believed to have been the first to come upon the idea of the T-beam when he was studying reinforced concrete in the 1850s, but the first useful T-beam was developed by the Belgian Francois Hennebique at the turn of the present century (Lay 1992:293). The earliest references to T-beam bridges refer to the type as concrete slab and beam construction, a description that does not distinguish the T-beam design from the concrete deck girder. Henry G. Tyrrell was perhaps the first American bridge engineer to use the now standard term "T-beam" in his treatise *Concrete Bridges and Culverts*, published in 1909. Tyrrell commented that "it is permissible and good practice in designing small concrete beams which are united by slabs, to consider the effect of a portion of the floor slab and to proportion the beams as T-beams" (Tyrrell 1909:186).

By 1920, reinforced concrete, T-beam construction had found broad application in standardized bridge design across the United States. In his text, *The Design of Highway Bridges of Steel, Timber and Concrete*, Milo S. Ketchum included drawings of standard T-beam spans recommended by the U.S. Bureau of Public Roads as well as drawings of T-beam bridges built by state highway departments in Ohio, Michigan, Illinois, and Massachusetts (Ketchum 1920). By the 1930s the T-beam bridge was widely built in Maryland and Virginia.

Maryland's roads and bridge improvement programs mirrored economic cycles. The first road improvement of the State Roads Commission was a 7 year program, starting with the Commission's establishment in 1908 and ending in 1915. Due to World War I, the period from 1916-1920 was one of relative inactivity; only roads of first priority were built. Truck traffic resulting from war related factories and military installations generated new, heavy traffic unanticipated by the builders of the early road system. From 1920-1929, numerous highway improvements occurred in response to the increase in Maryland motor vehicles from 103,000 in 1920 to 320,000 in 1929, with emphasis on the secondary system of feeder roads which moved traffic from the primary roads built before World War I. After World War I, Maryland's bridge system also was appraised as too narrow and structurally inadequate for the increasing traffic , with plans for an expanded bridge program to be handled by the Bridge Division, set up in 1920. In 1920 under Chapter 508 of the Acts of 1920 the State issued a bond of $3,000,000.00 for road construction; the primary purpose of these monies was to meet the state obligations involving the construction of rural post roads. The secondary purpose of these monies was to fund (with an equal sum from the counties) the building of lateral roads. The number of hard surfaced roads on the state system grew from 2000 in 1920 to 3200 in 1930. By 1930, Maryland's primary system had been inadequate to the huge freight trucks and volume of passenger cars in use, with major improvements occurring in the late 1930's. Most improvements to local roads waited until the years after World War I.

In the early years, there was a need to replace the numerous single lane timber bridges. Walter Wilson Crosby, Chief Engineer, stated in 1906, "the general plan has been to replace these [wood bridges] with pipe culverts or concrete bridges and thus forever do away with the further expense of the maintenance of expensive and dangerous wooden structures." Within a few years, readily constructed standardized bridges of concrete were being built throughout the state.

In 1930, the roadway width for all standard plan bridges was increased to 27 feet in order to accommodate the increasing demands of automobile and truck traffic (State Roads Commission 1930). The range of span lengths remained the same, but there were some changes designed to increase the load bearing capacities. The reinforcing bars increased in thickness. Visually, the 1930 design can be distinguished from its predecessors by the pierced concrete railing that was introduced at this time.

In 1933, a new set of standard plans were introduced by the State Roads Commission. This time their preparation was not announced in the Report; new standard plans were by this time nothing special - they had indeed become standard. Once again accommodating the ever-increasing demands of traffic, the roadway was increased, this time to 30 feet. The slab span's reinforcing bars remained the same diameter but were placed closer together to achieve still more load capacity.

**When the bridge was built and/or given a major alteration, did it have a significant impact on the growth and development of the area?**

There is no evidence that the construction of this bridge had a significant impact on the growth and development of this area.

**Is the bridge located in an area which may be eligible for historic designation and would the bridge add to or detract from the historic/visual character of the potential district?**

This bridge is located within the Ellicott City Historic District, which is listed on the National Register of Historic Places. It was determined by the Maryland Historical Trust that the bridge does not retain sufficient integrity to be considered a contributing resource within the Ellicott City Historic District.

**Is the bridge a significant example of its type?**

A significant example of a concrete beam bridge should possess character-defining elements of its type, and be readily recognizable as an historic structure from the perspective of the traveler. The integrity of distinctive features visible from the roadway approach, including parapet walls or railings, is important in structures which are common examples of their type. In addition, the structure must be in excellent condition. This bridge is not identifiable as a significant crossing from the perspective of the traveler. The bridge lacks such features as parapet walls and wing walls, has considerable deterioration and is an undistinguished example of a concrete beam bridge.

**Does the bridge retain integrity of important elements described in Context Addendum?**

The bridge lacks the character-defining elements of its type, as defined by the Statewide Historic Bridge Context, including parapets and wing walls.

**Is the bridge a significant example of the work of a manufacturer, designer, and/or engineer?**

This bridge is not a significant example of the work of a manufacturer, designer, and/or engineer.

**Should the bridge be given further study before an evaluation of its significance is made?**

No further study of this bridge is required to evaluate its significance.

**BIBLIOGRAPHY:**

**County inspection/bridge files** ___X___ **SHA inspection/bridge files** _____
**Other (list):**

Ketchum, Milo S.
1908 *The Design of Highway Bridges and the Calculation of Stresses in Bridge Trusses.* The Engineering News Publishing Co., New York.

1920 *The Design of Highway Bridges of Steel, Timber and Concrete*. Second edition. McGraw-Hill Book Company, New York.

Lay, Maxwell Gordon
1992 *Ways of the World: A History of the World's Roads and of the Vehicles That Used Them.* Rutgers University Press, New Brunswick, New Jersey.

Luten, Daniel B.
1912 Concrete Bridges. *American Concrete Institute Proceedings* 8:631-640.

1917 *Reinforced Concrete Bridges*. National Bridge Company, Indianapolis, Indiana.

Maryland State Roads Commission
1930a *Report of the State Roads Commission for the Years 1927, 1928, 1929 and 1930.* State of Maryland, State Roads Commission, Baltimore.

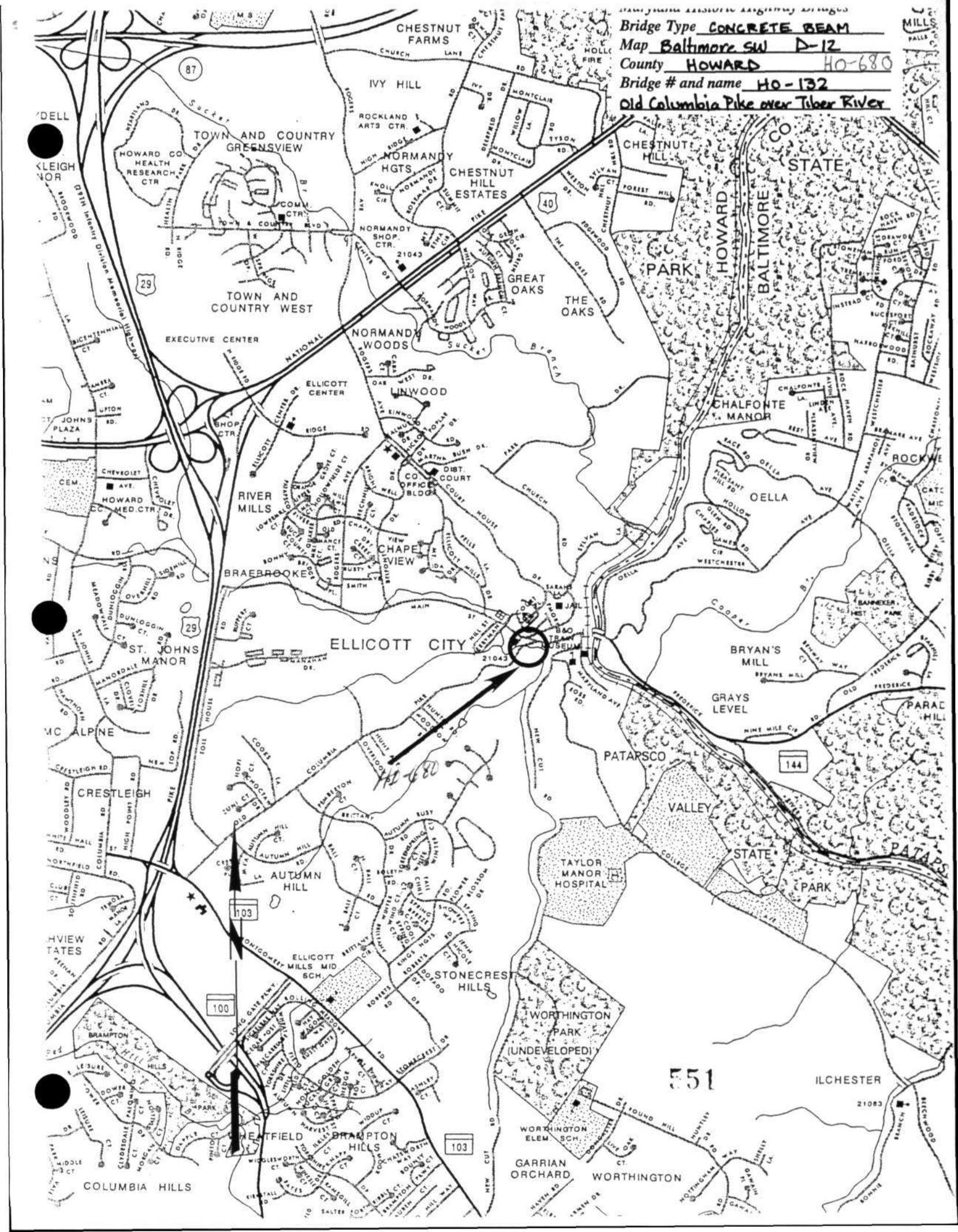
1930b *Standard Plans.* State of Maryland, State Roads Commission, Baltimore.

Taylor, Frederick W., Sanford E. Thompson, and Edward Smulski
1939 *Reinforced-Concrete Bridges with Formulas Applicable to Structural Steel and Concrete.* John Wiley & Sons, Inc., New York.

Tyrrell, H. Grattan
1909 *Concrete Bridges and Culverts for Both Railroads and Highways.* The Myron C. Clark Publishing Company, Chicago and New York.

**SURVEYOR:**

**Date bridge recorded** 2/25/97
**Name of surveyor** Caroline Hall/Tim Tamburrino
**Organization/Address** P.A.C. Spero & Co., 40 W. Chesapeake Avenue, Baltimore, MD 21204
**Phone number** (410) 296-1685 **FAX number** (410) 296-1670


Maryland Historic Highway Bridges
Bridge Type CONCRETE BEAM
Map Baltimore SW D-12
County HOWARD HO-680
Bridge # and name HO-132
Old Columbia Pike over Tiber River
CHESTNUT FARMS
IVY HILL
TOWN AND COUNTRY GREENSVIEW
HOWARD CO HEALTH RESEARCH CTR
NORMANDY HGTS
CHESTNUT HILL ESTATES
CHESTNUT HILL
HOWARD CO STATE PARK
BALTIMORE
TOWN AND COUNTRY WEST
EXECUTIVE CENTER
NORMANDY WOODS
GREAT OAKS
THE OAKS
UNWOOD
CHALFONTE MANOR
ELLICOTT CENTER
RIVER MILLS
CHAPEL VIEW
BRAEBROOKE
OELLA
ROCKWELL
ELLICOTT CITY
ST. JOHNS MANOR
MC ALPINE
CRESTLEIGH
AUTUMN HILL
BRYAN'S MILL
GRAYS LEVEL
PATAPSCO
VALLEY STATE PARK
TAYLOR MANOR HOSPITAL
ELLICOTT MILLS MID SCH
STONECREST HILLS
WORTHINGTON PARK (UNDEVELOPED)
BRAMPTON
HEATHFIELD
BRAMPTON HILLS
COLUMBIA HILLS
GARRIAN ORCHARD
WORTHINGTON
WORTHINGTON ELEM SCH
ILCHESTER
551
B&O TRAIN MUSEUM
HOWARD CO MED CTR
ELLICOTT MILLS
MILLS
87
29
40
144
103
100

**CONTRIBUTING RESOURCE**
**MARYLAND HISTORICAL TRUST**
**INTERNAL NR-ELIGIBILITY REVIEW FORM**

HO-680

Within District

Property Name: Bridge over Tiber Branch Survey Number: HO-78

Property Address: Old Columbia Pike over Tiber Branch

Project: REHAB Agency: FHA

Site visit by MHT Staff: _X_ no ___ yes Name _____ Date _____

District Name: Ellicott City Historic District Survey Number: HO-78

__X__ Listed _____ Eligible _____ Comment

Criteria: ___A ___B _X_C ___D Considerations: ___A ___B ___C ___D ___E ___F ___G ___None

The resource ____ contributes/__X_ does not contribute to the historic significance of this historic district in:

_____ Location _____ Design _____ Setting _____ Materials

_____ Workmanship _____ Feeling _____ Association

Justification for decision: (Use continuation sheet if necessary and attach map)

The bridge on Columbia Pike which crosses over the Tiber Branch in the Ellicott City Historic District does not retain sufficient integrity to be considered a contributing resource within the Ellicott City Historic District. Originally built in 1921, the flat-deck, single-span bridge has undergone two significant periods of alteration. The original structure consists of stone piers supporting a concrete superstructure of concrete T-beams. In 1964, the bridge was widened and reinforced with steel. In 1983 and again in 1993, the State Highway Administration performed extensive concrete and stone masonry repairs to the bridge, further compromising its integrity.

Documentation on the property is presented in: _____

Prepared by: _____

Elizabeth Hannold and Kim Williams — June 15, 1995
Reviewer, Office of Preservation Services — Date

NR program concurrence: ✓ yes ___ no ___ not applicable

Reviewer, NR program — rec'd 2/8/96; reviewed 2/13/96
Date

(within HO-78)

Survey No. HO-680

**MARYLAND COMPREHENSIVE HISTORIC PRESERVATION PLAN DATA - HISTORIC CONTEXT**

**I. Geographic Region:**

| | | |
|---|---|---|
| ____ | Eastern Shore | (all Eastern Shore counties, and Cecil) |
| ____ | Western Shore | (Anne Arundel, Calvert, Charles, Prince George's and St. Mary's) |
| _X_ | Piedmont | (Baltimore City, Baltimore, Carroll, Frederick, Harford, Howard, Montgomery) |
| ____ | Western Maryland | (Allegany, Garrett and Washington) |

**II. Chronological/Developmental Periods:**

| | | |
|---|---|---|
| _____ | Paleo-Indian | 10000-7500 B.C. |
| _____ | Early Archaic | 7500-6000 B.C. |
| _____ | Middle Archaic | 6000-4000 B.C. |
| _____ | Late Archaic | 4000-2000 B.C. |
| _____ | Early Woodland | 2000-500 B.C. |
| _____ | Middle Woodland | 500 B.C. - A.D. 900 |
| _____ | Late Woodland/Archaic | A.D. 900-1600 |
| _____ | Contact and Settlement | A.D. 1570-1750 |
| _____ | Rural Agrarian Intensification | A.D. 1680-1815 |
| _____ | Agricultural-Industrial Transition | A.D. 1815-1870 |
| _X_ | Industrial/Urban Dominance | A.D. 1870-1930 |
| _____ | Modern Period | A.D. 1930-Present |
| _____ | Unknown Period ( ___ prehistoric | ____ historic) |

**III. Prehistoric Period Themes:**

| | |
|---|---|
| _____ | Subsistence |
| _____ | Settlement |
| _____ | Political |
| _____ | Demographic |
| _____ | Religion |
| _____ | Technology |
| _____ | Environmental Adaption |

**IV. Historic Period Themes:**

| | |
|---|---|
| _____ | Agriculture |
| _____ | Architecture, Landscape Architecture, and Community Planning |
| _____ | Economic (Commercial and Industrial) |
| _____ | Government/Law |
| _____ | Military |
| _____ | Religion |
| _____ | Social/Educational/Cultural |
| _X_ | Transportation |

**V. Resource Type:**

Category: Structure

Historic Environment: Urban

Historic Function(s) and Use(s): Transportation/Road-related

Known Design Source: _____

HO-650

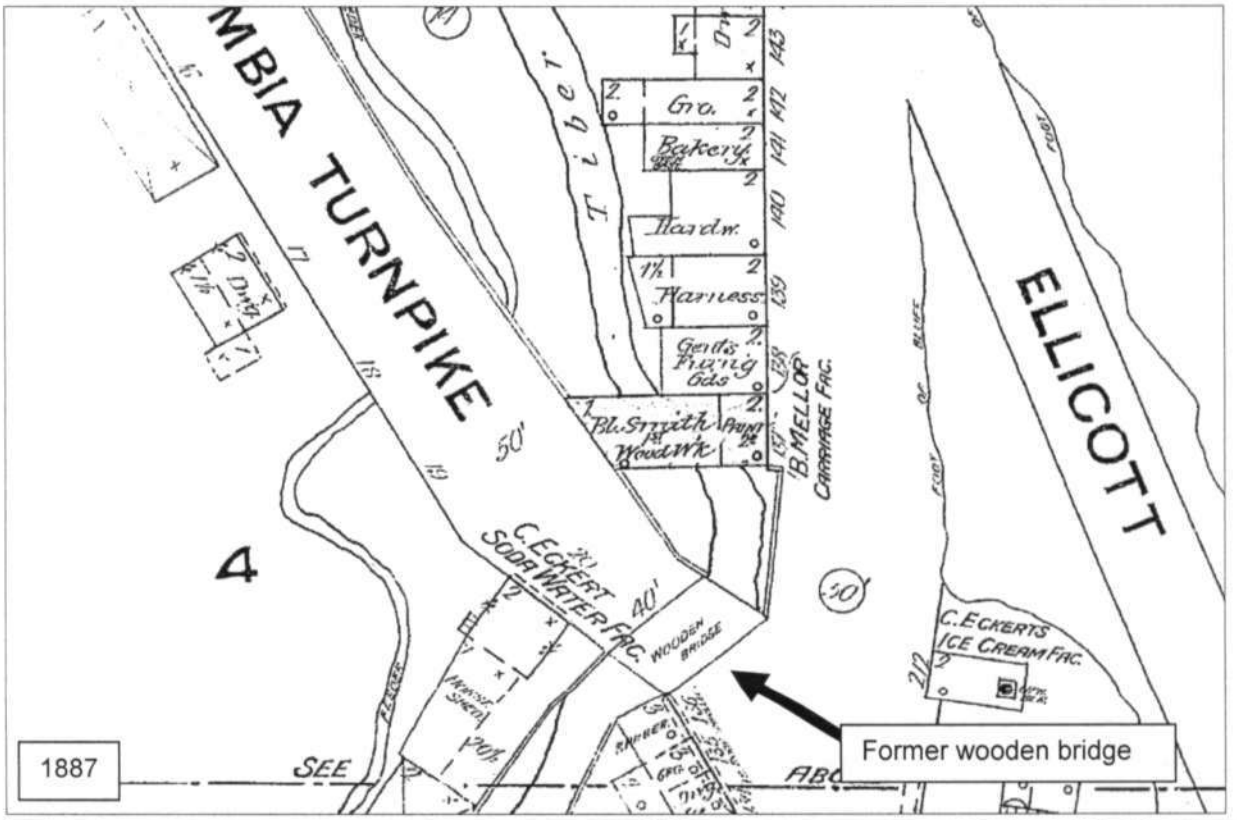
1992 HOWARD COUNTY
BRIDGE INSPECTION

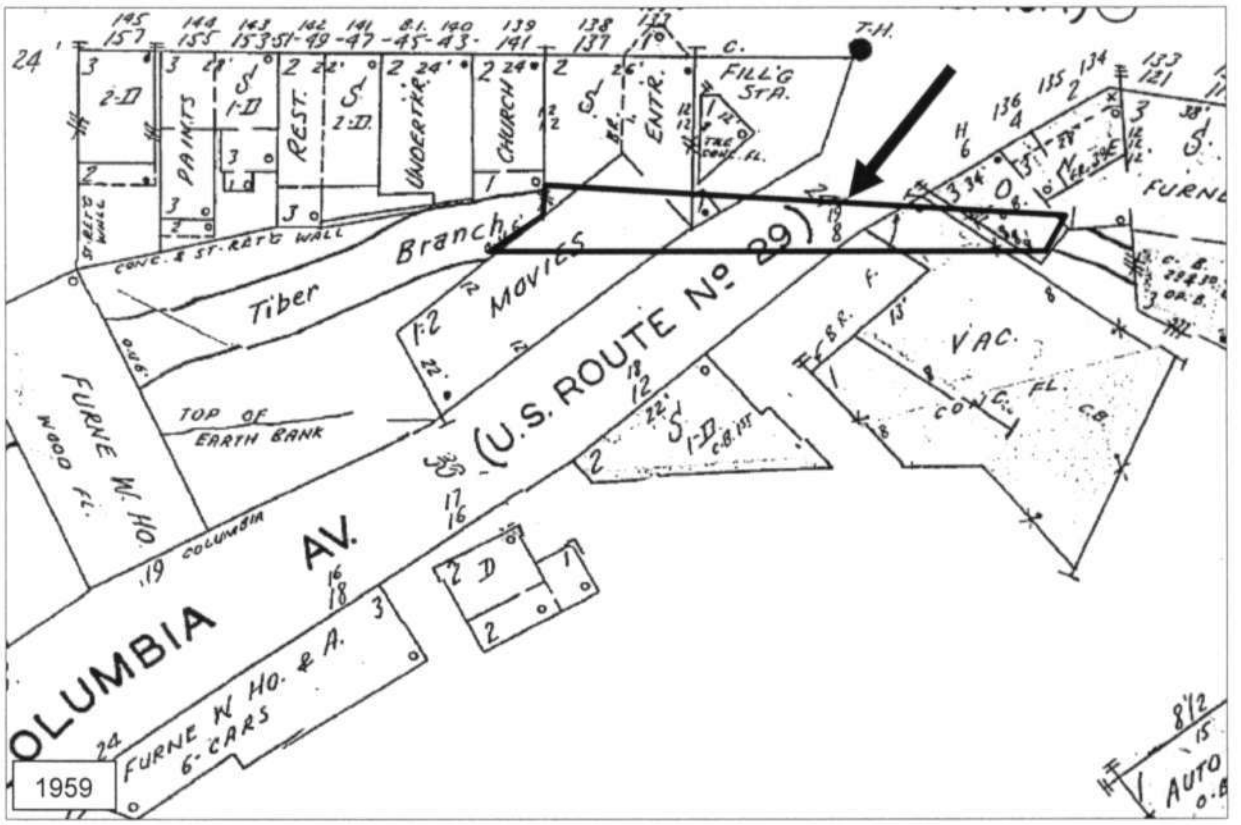
BRIDGE NO. HO-132
OLD COLUMBIA PIKE OVER TIBER RIVER

NO. 1 - NORTH APPROACH

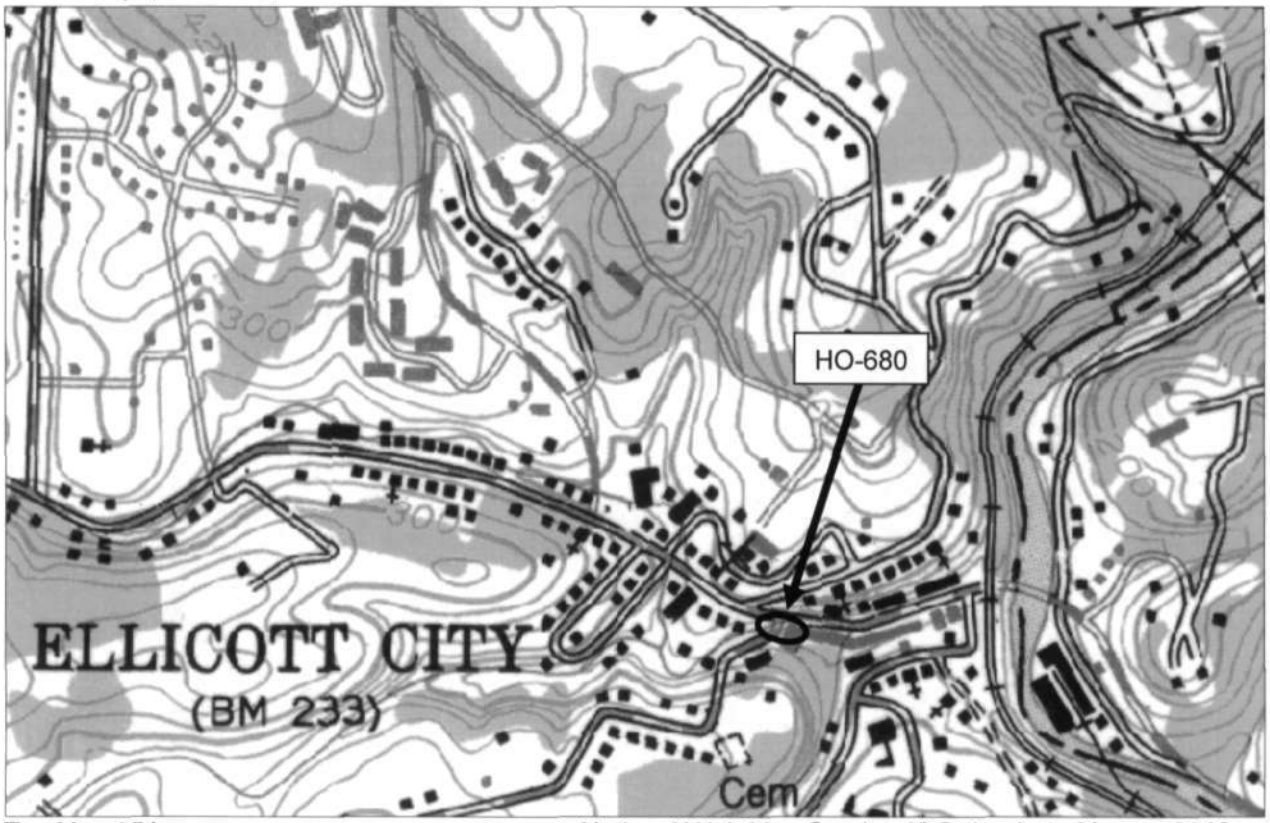

NO. 2 - SOUTH APPROACH

HO-680
Bridge (SHA HO-132), Old Columbia Pike over Tiber River, Ellicott City
Sanborn Maps

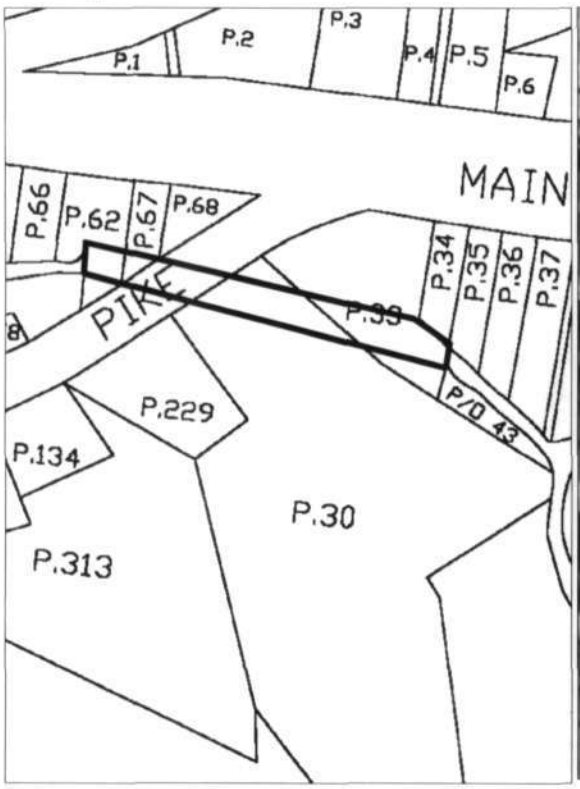


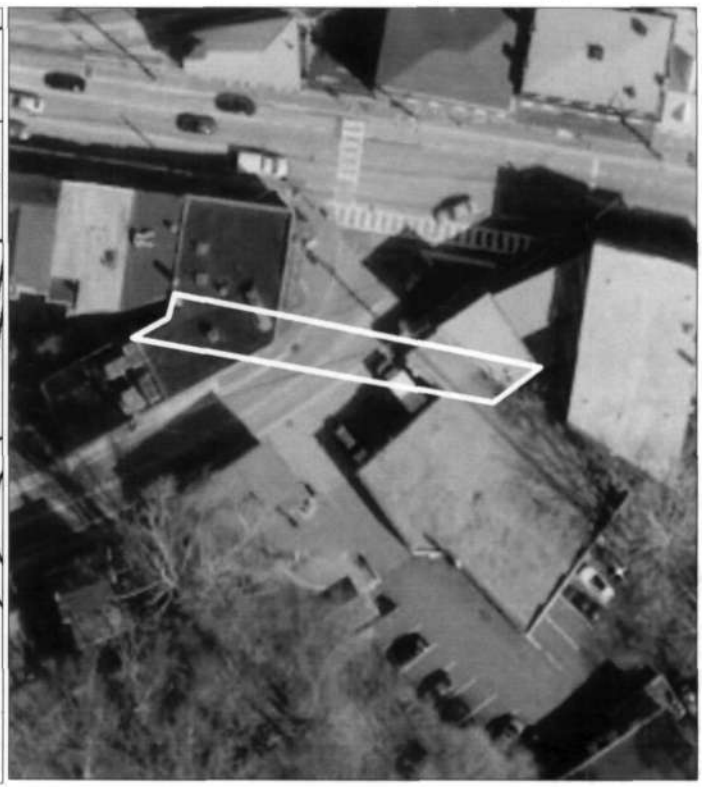
HO-680
Bridge (SHA HO-132), Old Columbia Pike over Tiber River, Ellicott City
Ellicott City quad 1953, Photorevised 1966 and 1974




Tax Map 25A




National Web Map Service 6" Orthophoto Map, c. 2010



HO-680
Bridge (SHA HO-132), Old Columbia Pike over Tiber River, Ellicott City
Photos by Jennifer K. Cosham, 11/28/2012
8221-25 Main Street (MD 144), over west portion of bridge


Rear of buildings on south side of Main. Bridge entrance in corner.

HO-680
Bridge (SHA HO-132), Old Columbia Pike over Tiber River, Ellicott City
Photos by Jennifer K. Cosham, 11/28/2012
8197 Main Street (MD 144), over east portion of bridge



Ellicott Theatre

1. HO-680
2. (HO-132) Old Columbia Pike over Tiber River
3. Howard Co. M.D.
4. Tim Tamburrino
5. 3-97
6. MD SHPO
7. North approach
8. 1 of 4

1. HO-680
2. (HO-132) Old Columbia Pike over Tiber River
3. Howard Co. MD
4. Tim Tamburrino
5. 3-97
6. MD SHPO
7. South approach
8. 2 of 4

1. HO-680
2. (HO-132) old Columbia Pike over Tiber River
3. Howard Co. M.D.
4. Tim Tamburrino
5. 3-97
6. MD SHPO
7. West elevation
8. 3 of 4

1. HO-680
2. (HO-132) Old Columbia Pike over Tiber River
3. Howard Co. M.D.
4. Tim Tamburrino
5. 3-97
6. MD SHPO
7. Underside of deck
8. 4 of 4